THE DELAWARE AND HUDSON RAILROAD BULLETIN

"The D&H"

APRIL 1, 1934

Goin' Fishin'

MAYBE I won't catch nothin'
Because the sun's too bright
For the fish to rise to flies today,
But I don't care a mite.

I can hear the pines a-whisperin'
When they're swayin' in the breeze
And hear the birds a-singin'
As they fly among the trees.

I can hear the brook a-gurglin,'
And can look up in the sky
And see the pretty color of
The clouds as they float by.

I may come home with empty creel
And yet with no regrets,
For there's more to goin' fishin'
Than the fish a feller gets.

—SELECTED.

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The
DELAWARE AND HUDSON RAILROAD
CORPORATION
BULLETIN

Mines Had "Devil Catchers"

Fifty Years Ago When Veteran Went to Work in Mill Creek Breaker

ELMER E. DILTS

ABOUT 200 yards below the surface of the ground, down the "slope" up which loaded cars of anthracite were hauled from the workings to the breaker fifty years ago, was the "devil catcher." His sole duty was to operate a derail, which he placed over the track behind an ascending string of cars and kept there until the train was safely over the top of the plane. A few minutes later a "trip" of empties would be lowered. If they descended slowly, apparently securely held by the cable, all was well; however, should a string of runaways come hurtling down the black slide, he closed the derail, leaped to the comparative safety of his shanty, set in a niche cut in the tunnel wall, and heard the crash of the cars as they were shattered to kindling in the passageway. Should a string continue uninterrupted down the slope, which descended on a steep grade for half a mile, the runaway might cause serious damage to persons and property before being dashed to pieces down in the depths of the earth.

To ELMER E. DILTS, retired Pennsylvania Division conductor, the mention of the "devil catcher" rekindled a host of memories of incidents which occurred at the old Mill Creek Breaker, at Hudson, Pa., when he was employed there over fifty years ago.

Born at Lake Ariel, in Wayne County, Pa., May 9, 1862, ELMER and his mother had moved to Hudson in 1872, shortly after the death of his father, who had been employed on the Pennsylvania's Gravity Railroad which operated between Port Griffith and Hawley, Pa. After completing the high school course at the age of sixteen, ELMER went to work at The Delaware and Hudson Canal Company's Mill Creek Breaker.

Here he was stationed at the head of a slope, it being his duty to uncouple loaded cars from the cable as they broke over the top, and to attach the cable to descending trains of empties. Unlike the Delaware and Hudson Gravity system, which used an endless cable with cones at intervals for the insertion of a hook, the slope had a single strand of rope wound around a drum operated by a stationary engine. The cable ended in a clevis which was secured to the link at the end of the car by means of a pin.

When a train reached the top of the incline, ELMER would stand between the rails; when the first car reached him he jumped on, snapped the pin out when the engineer slacked, and then threw the cable clear of the rails so it would not derail the cars. Should he be unable to pull the pin, as sometimes happened, the engineer had to stop his engine immediately or the cars would be demolished against the drum. As soon as a loaded trip was "in the clear," a string of empties was run toward the slope and he had to attach the cable "on the run." If he missed the coupling the cars would rush down the slope and disappear into the blackness of the tunnel while ELMER fervently prayed that the "devil catcher" was on the job.

After three years as "headman," ELMER was promoted to the rank of weighmaster, in which position he weighed outgoing cars, billed all the coal, and kept the office books. As both gravity and steam railroad cars were loaded at this breaker, it was difficult to estimate the average daily output of the plant in carloads; however, MR. DILTS does recall that for many years the record stood at 1,000 tons a day. A modern breaker will easily handle 15,000 tons.

In 1887, MR. DILTS was hired by Milot Shiffer, Delaware and Hudson yardmaster at Hudson, to fill a vacancy in the crew of Conductor Edward Ward, who had a mine run. They registered on duty at 6 or 7 a. m., depending on the arrival of empties from Olyphant, and made the rounds of a number of breakers in the vicinity of Wilkes-Barre and Hudson, remaining on duty until the work was done, no matter what the hour might be.

Oftentimes they started out of Hudson with as many as 180 Gravity Railroad cars, pulled by a single Mogul engine, which had very small drivers and was designed especially for this type of work. Frequently they handled both standard railroad cars and the much smaller Gravity cars in the same train. Even when the greatest of care was exercised the end of a Gravity car was frequently stove in, in which event they were under orders to simply push it down the embankment and leave it there.

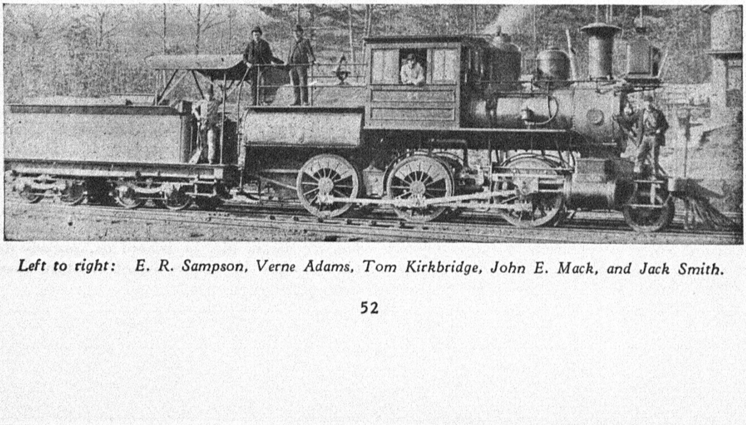
Six month's after he entered the railroad's employ, MR. DILTS was made extra conductor and shortly thereafter he was given a regular run. For six years his brother, John A. Dilts, was his regular engineer. Up until 1926, when all mine runs were temporarily abolished due to the suspension of mining operations, MR. DILTS did nothing but that type of work. His last six years of railroading were spent on a fast freight run between Wilkes-Barre and Oneonta.

Only twice in his 45 years as a railroader did MR. DILTS work on a passenger train, a class of service he did not care for. Once he took a special train from Wilkes-Barre to Scranton, and return, and later, when President Theodore Roosevelt was speaking in Wilkes-Barre, he operated an excursion train to that point from Carbondale.

What was his most thrilling experience? It occurred one day while he and a trainman were applying an air hose to a car in the middle of their train. They were startled when the train lurched forward, and, fearful that the engineer was starting, leaped from between the cars, only to see cars being hurled in all directions about them. A car had been derailed in a passing train and although dozens of shattered cars were piled up all around them, neither man was touched.

Mr. and Mrs. Dilts live at 38 Hillard Street, Wilkes-Barre. They have three children: Mrs. Harry G. Williams, wife of a Superintendent of the West End Coal Company, of Wilkes-Barre; Thomas G. Dilts, a printer, of Kingston, Pa.; and Harry E. Dilts, of Wilkes-Barre.

On a Carbondale-Nineveh Run in 1888



Left to right: E. R. Sampson, Verne Adams, Tom Kirkbridge, John E. Mack, and Jack Smith.

Paul Revere

Without His Horse

This caption over an article by Donald Wilhelm in Nation's Business, extracts from which follow, might well have been "Born 30 Years too Soon" had the author pointed out that Paul would certainly have been a railroader had he not died but five years prior to the founding of our company in 1823.

IT is time we changed our ideas and enlarged our picture of Paul Revere. Although the heart of every American beats a bit faster when he hears those familiar lines beginning:

> *"Listen, my children, and you shall hear*
> *Of the midnight ride of Paul Revere* *"*

it isn't fair that Revere should be remembered merely as a patriotic horseman riding down the centuries. Revere was an important business man of his day; also he was a manufacturer of distinction.

This ride was only an incident in Revere's service to his country as a messenger, adventurer and patriot of hot-blooded Huguenot and Puritan ancestry. Study of the records shows that for months he was "riding" most of the time. In his own odd spelling he notes:

"In the year 1773 I was imployed by the Selectmen of the Town of Boston to carry the account of the Destruction of the Tea to New-York, & afterwards, 1774, to carry their dispatches to New-York & Philadelphia for Calling a Congress; & afterwards to Congress, several times * *"

He was "imployed" to ride and rode so much that he received remuneration therefor, since he had a large family—he was the father of sixteen children—to support. But he was a manufacturer as well as a horseman. Thus we find him, November 12, 1775, en route to Philadelphia, where the only gunpowder factory in America was located, carrying credentials saying:

"This Certifies that Mr. Paul Revere is going express from the Colony of Massachusetts Bay to the American Congress; all persons upon the road are desired to assist him with Horses or any other things he may stand in need of

James Otis (Senior)
Prest. of Council."

The proprietor of the only powder factory in America, one Oswell Eve, revealed as little as possible, guessed that a mere messenger could know little about chemistry and mechanics but—guessed wrong!

For Revere galloped back to Boston. And there, after he had seen to it that a powder factory was built with public funds, in the spring of 1776 we find him successfully supervising the manufacture of gunpowder, every keg of which made American history. From the making of gunpowder he now turned to casting brass cannon for our military forces. Then from brass, an alloy of copper and zinc, he worked over to bronze, an alloy of copper and tin, and, in 1792, he began to manufacture bells, the first of which, his historians say, was made for the New Brick Church on Middle Street, now the Second Unitarian Church in Copley Square, where he worshipped.

This bell, now the proud possession of St. James Episcopal Church in Cambridge, bears the inscription, "The first bell cast in Boston, 1792, by P. Revere."

Revere was an etcher and engraver on copper of book plates, dies, and seals, including views of scenic interest such as the landing of the first British troops in Boston and views of Harvard College. In silver and gold he created exquisite things still treasured by the Boston Museum of Fine Arts, the Metropolitan Museum and a few fortunate old New England families. He did picture-framing and made cases for miniatures.

He advertised himself in the *Boston Gazette and Country Journal* on September 19, 1768, as expert in the matter of fixing "fake teeth," as he called them, adding in another advertisement two years later due thanks for patronage, along with the statement that his teeth are "not only an Ornament but of real use in Speaking and Eating." Moreover, Revere added that "He cleanses the Teeth and * * *may be spoke with at his shop opposite Dr. Clark's at the North End where the Gold and Silversmith's Business is carried on in all its branches."

Years later, in 1776, when the body of General Joseph Warren was exhumed from its place of burial after the Battle of Bunker Hill, it was identified by Revere who recognized an artificial tooth he had made for this one of many highly influential Americans, his personal friend.

His friend Copley, the celebrated painter of portraits, including Revere's own, pictured him as "a man in early life, eyes and hair dark, the face strong and expressive, leaning on a bench, his coat off, waistcoat unbuttoned, his white shirt loose at the neck and wrists, his hair unpowdered* * *his tools scattered on the bench before him."

Other glimpses of him at different periods of life suggest how instinctively a man of action and affairs he was. He was appointed coroner in Boston in 1796 and kept precise notes of 46 "inquisitions." His name headed the list of charter members of the first successful effort in America to insure property against fire, that of the Massachusetts Fire Insurance Company, chartered in 1798; he served on the "Committee of Correspondence;" on another to "Collect all Names of Enemies of this Continent;" on yet another to prepare a List for the Draft;" on still others that may be taken for a sign of high public esteem and confidence.

Add that he was the first president of the Massachusetts Charitable Mechanic Association, first chairman of the Boston Board of Health, and that he held not a few other public or semi-public offices.

The cause of liberty received the full benefits of his versatility. He was an ardent member of the Sons of Liberty and attended the secret sessions of the Long Room Club which Daniel Webster later called "the headquarters of the Revolution." He was one of our earliest cartoonists and caricaturists; his work in this field including an attack on the Seventeen Rescinders in the Massachusetts legislature—seventeen who voted for allegiance to the Crown—that circulated everywhere.

Few of us know that in 1775 Revere engraved and printed on a press of his own manufacture, the first paper money ever issued by our Government. In the same year and the next he manufactured additional bank notes, in smaller denominations, for our soldiers, and made the plates for later issues voted by Congress.

All of these things, however, were among his minor achievements. It was not until 1800, when he was well past 60, that Revere made his greatest contribution to American industry—the mastery, technically as well as commercially, of the subtle secrets of rolling copper.

Looking back, it seems that all his life's work had gone to prepare him for this achievement. It would seem, too, that this victory in itself was sufficient to win him undying fame.

But let's try to get the picture whole by noting, to begin with, that even before 1800 Revere and all other alert Americans felt certain that another war with Great Britain was almost inevitable. Revere knew, in other words, that though, by the Revolution, we had won our political freedom, it was questionable if we could retain that and prosper unless we won our economic freedom too. Winning our economic freedom meant winning our right in all ways to expand our individual and collective area of operations.

The colonists had to make with their own hands or get from the soil or the sea or the forest virtually everything they used. They were starved for gold, for luxuries, for that sense of security and well-being that can only be achieved by cash in hand and comfort in the home.

That is why, in the day when there was, except for a few water-wheels, no power but the muscle power of man and beast; no land transportation save by horse; no good roads; when, in short, the radius of operations of any individual was hardly larger than he could see or his voice could call down the wind, that our fishing schooners soon were surpassing England's in their catch and our clipper ships were sailing round the world, bartering everywhere, settling our Northwest before the advent of the covered wagon.

But Revere knew, and so did our Navy Department, that our schooners, clippers, sloops and ships of war needed, to keep their bottoms clean and free from borers, sheathing made of copper or its alloys which, at the turn of the century, only English manufacturers could make.

Even before 1800 Revere began to experiment, in the hope of learning the subtle secrets, then vitally important to the colonists, involved in rolling and working copper. He knew his metal, had worked with it from time to time over a long period of years; in fact it may be said that he had given much—in a sense all—of his life to preparation for a responsibility that he alone in America was qualified to accept.

To Harrison Gray Otis, Member of Congress, on March 11, 1800, he wrote:

"It is the universal belief of all coppersmiths that no one in this country could make Copper so malleable as to hammer it hot. I have farther found it is a Secret that lay in a very few Breasts in England. I determined if possible to find the Secret and have pleasure to say that after a great many tryals and considerable expense I gained it. * * *"

So far, so good! But Revere went further, to establish himself past question as the founder of our copper industry.

Accordingly, on March 14, 1801, we find him purchasing the site—the cradle of our copper industry—on the east branch of the Neponset River, near Canton, Mass., where, in 1776, he had, for his compatriots, manufactured gunpowder. Here, in addition, he acquired a large tract of forest. Having no other fuel, he had, at the beginning, to use wood in his furnace as well as in "poling" his copper and desired, therefore, to have a place where, when not working his metal, his men could wield axes and saws!

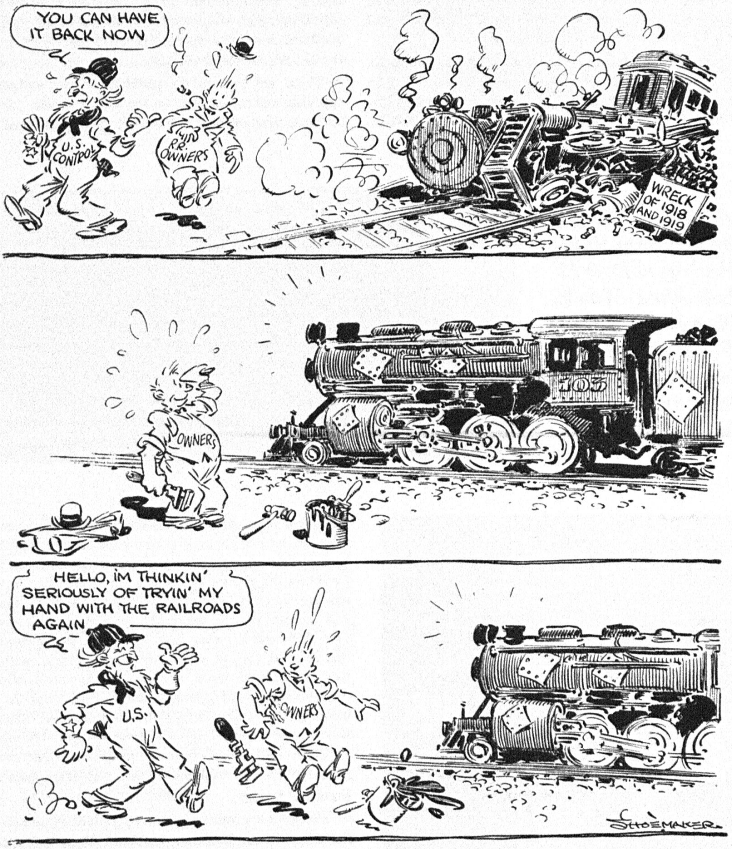
But land was plentiful, and cheap; equipment was scarce—scarcely available at all—and costly!

He needed financing, therefore, as badly as our shipbuilders and our Navy needed copper sheathing. At any rate our Navy Department, then, like our ships of war, mainly in prospect, advanced him $10,000, a large sum for those days, and, its records show, agreed to take payment in copper.

Then, piecing our the picture as well as we can, Revere directed the building of a furnace—a good deal of a furnace, since he wrote to Col. Joshua Humphries of Philadelphia, the designer of *Old*

(Continued on page 59)

LET'S HOPE THE ENGINEER HAS IMPROVED


YOU CAN HAVE IT BACK NOW
U.S. CONTROL
R.R. OWNERS
WRECK OF 1918 AND 1919
OWNERS
103
HELLO, IM THINKIN' SERIOUSLY OF TRYIN' MY HAND WITH THE RAILROADS AGAIN
U.S.
OWNERS
SHOEMAKER

Reprint from The Chicago Daily News (January 24, 1934)

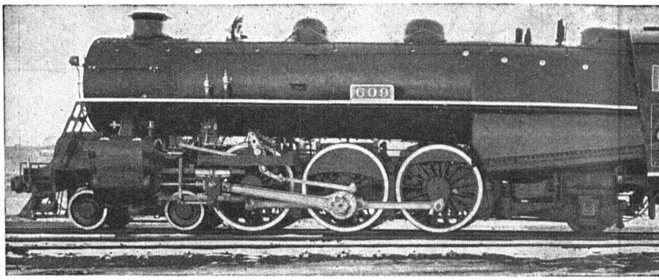
World's First Roller-Bearing Rods on Del

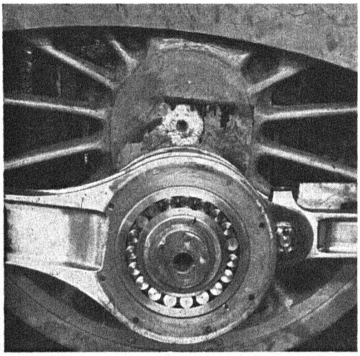
WITH the completion of locomotive No. 609, reconstructed at Colonie Shops and placed in service February 2, 1934, the Delaware and Hudson again takes the lead in a development of primary importance in America, (and, it is believed, the world) by turning out the first motive power in which SKF self-aligning roller bearings have been substituted for the brass type generally used in the back end of the main rods and in the middle connections of the side rods.

SKF roller bearings are also used on the main driving axle, a similar application having been in satisfactory operation on Delaware and Hudson locomotive No. 1071, the first railroad-owned locomotive in the world to be so equipped, since September 1930. (The *L. F. Loree*, No. 1403, built last year, has a similar installation.) Three months prior to the application of roller bearings on the main axle of the 1071, the attention of the public was called to the possibilities of this use of anti-friction bearings by the construction, for a bearing manufacturer, of a locomotive in which roller bearings were used on all the axles. This machine, however, was equipped with the conventional type of rod bushings.

There are two major problems to be solved in applying roller bearings to the driving rods. First is the matter of size and weight, the roller bearings weighing more than the brasses which they replace, and, in addition, taking up more room, so that larger rods are necessary and must be allowed for by increasing the weight of the counterbalance in the driving wheel in order to prevent damage to track and bridges and to make the locomotive ride well. For this reason, when the 609 was reconstructed, the original carbon steel rods were replaced with a new set forged from a carbon-nickel steel alloy. The strength and ductility of this material is so much greater than that of the original steel that it was possible to redesign the rods so that, complete with the roller bearings, they weigh but little more than the old set and very little added counterbalancing is needed.

Application of SKF Self-Aligning Roller Bearings to D. & H. Locomotive Marks New Era in Motive Power Design. Below is Shown Bearing Applied to a Main Rod.





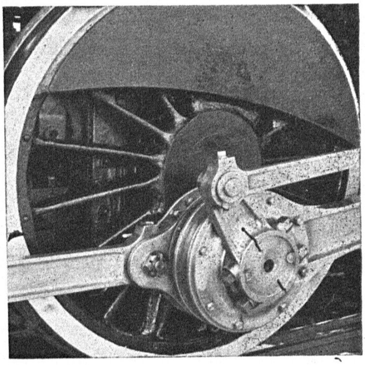
The second problem is that of providing sufficient flexibility in the bearing to allow various connected parts of the machine to adjust themselves as the

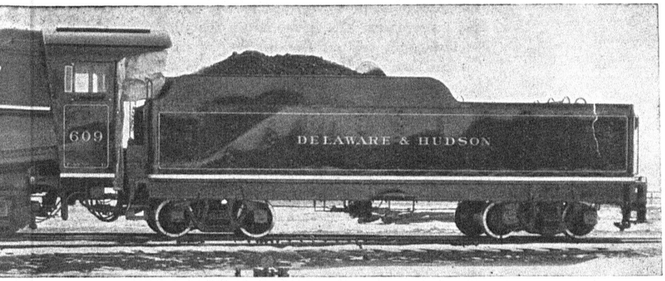
Delaware and Hudson

locomotive takes curves or when the front driving wheels develop lateral motion as the result of several thousand miles of service.

The roller bearings applied to the rods of locomotive 609 run in raceways shaped like portions of a hollow sphere, thus allowing for any necessary motion of the rods relative to the main crank-pin.

Application of roller bearings to the main axle was made in conjunction with necessary frame replacement, the additional space occupied by the new type bearings being provided for between the frame jaws. The new frames also provide for the relocation of the air compressor and electric generator between the driving wheels as was done in the cases of locomotives 651-3.





Reduced Maintenance Costs and Elimination of "Hot Pins" Result from Use of Rollers in Rod Bearings. Above View shows Complete Assembly of Driving Rods.

Electrically lighted numbers attached to the running-boards on either side, the headlight sunk in the center of the smokebox door, the English type cab and smokestack and the highly polished rods and motion-work give the 609 a distinctive appearance and attract much favorable comment.

After the usual breaking-in period in local service it is probable that the locomotive will be assigned to the heavy, fast passenger service on the New York-Montreal sleepers, which make no scheduled station stops in the 220-mile run between Troy, N. Y., and Montreal West.

It is probable that the successful operation of the 609 will result in the reconstruction of the remaining engines of the "P" class along similar lines.

"Enormous Turntable"

"An enormous turntable, the largest ever made for the Delaware and Hudson Company, arrived here today from Scranton, Pa., where it was built. It is of wrought iron and is 55 feet long, which is five feet longer than any now in use on the road. It will hold any locomotive no matter how long. The turntable will be placed in use at the new D. & H. roundhouse at Stoney Lane (now Seneca Street, Schenectady)."

The above item, printed in the *Schenectady Union-Star* February 2, 1934, in the column headed "50 Years Ago Today," gives some idea of the increase in the length of locomotives during the past half century. Our newest turntable, installed at the Colonie roundhouse April 30, 1928, is 105 feet long.

The
Delaware and Hudson Railroad
CORPORATION
BULLETIN

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DELAWARE AND HUDSON BUILDING.
ALBANY, N. Y.

PUBLISHED MONTHLY by The Delaware and Hudson Railroad Corporation, for the information of the men who operate the railroad, in the belief that mutual understanding of the problems we all have to meet will help us to solve them for our mutual welfare.

All communications should be addressed to the Supervisor of Publications, Delaware and Hudson Building, Albany, N. Y.

Vol. 14 **April 1, 1934** **No. 4**

UNTO those who talk and talk,
This proverb should appeal:
"The steam that blows the whistle
Will never turn the wheel."

—SELECTED.

Another Record

SINCE its incorporation The Delaware and Hudson Company has had eight presidents. John Wurts, the third, held the position for the longest period of the eight—from April 13, 1831 to March 15, 1858, or 26 years 11 months—a record which has stood until March 12th, 1934, on which it was surpassed by our President, LEONOR F. LOREE, who has been the Company's chief executive since April 10, 1907.

111 Years Young

APRIL 23rd, 1934 marks the 111th anniversary of the founding of The Delaware and Hudson Canal Company. From the time of the erection of a log house by the Wurts brothers in the midst of the wilderness of northeastern Pennsylvania on the site of what is now Carbondale, and the sledding and rafting of the first Lackawanna anthracite into Philadelphia by them, the history of the Company is filled with accounts of how the "impossible" was accomplished. The "impossible" has been aptly defined as "something which has not yet been accomplished."

Thus it has been that the Delaware and Hudson was the first railroad to operate a steam locomotive on its lines in America. From this notable beginning it is only natural that the Company should continue to lead in steam power development. Its experimental high-pressure locomotives are among the most efficient in the world, the *L. F. Loree*, No. 1403, last year's contribution to motive power advancement, having proven twice as efficient thermally as the ordinary locomotive.

It seems most appropriate, therefore, that the latest forward step along this line should be announced in this anniversary issue of *The Bulletin:* the world's first application of self-aligning roller bearings to locomotive driving rods on Delaware and Hudson Locomotive No. 609, on February 2nd of this year.

Not alone in the development of motive power is this pioneering spirit to be found. The use of compressed gas in portable cylinders for the operation of pneumatic tools in maintenance of way work, also described in this issue, while not claimed to be the first case on record, is believed to be the first instance in which careful tests were made to determine just how much might be expected of the new method before it was put into actual service. It is believed that this is among the first instances in which compressed nitrogen has been so used.

It has been said that when a man begins to live in the past, to think about the things that he has done rather than those that he expects to do, he is growing old. So it is with a business organization. Despite its 111 years The Delaware and Hudson Company still looks far ahead and retains its claim to youth although rich in its experience.

Magnanimity of Big Men

THE story is told that during the Civil War Jefferson Davis one day wanted a reliable officer for an important command. He asked General Lee what he thought of a certain man by the name of Whiting for the post. Lee commended him highly. One of the latter's officers was greatly surprised at the General's commendations, and, calling him aside, asked him if he knew what unkind things Whiting had been saying about him. Lee said, "I understand that the President wanted to know my opinion of Whiting, and not Whiting's opinion of me."

Big men are too magnanimous to notice criticisms or slights. It is the small man who is carried away with his own importance, who cannot overlook personal attacks.—*Success.*

* * *

The able men are not those who are seeking the easy things to do, but rather those who take delight and pride in performing the most difficult feats.

Bottled Gas Saves Money on Small Jobs For Our Maintenance Forces

AMONG the many short cuts that have been discovered in the attempt to make money go as far as possible in the operation of the railroad, one of the most unique has been adopted by our Bridge and Building maintenance organization. With the displacement of hand tools by pneumatic machines came the necessity of providing the air to operate the latter. For small repair jobs the cost of transporting an air compressor to the desired location and getting it set up to run often costs from $50 to $75, perhaps as much as doing the actual work.

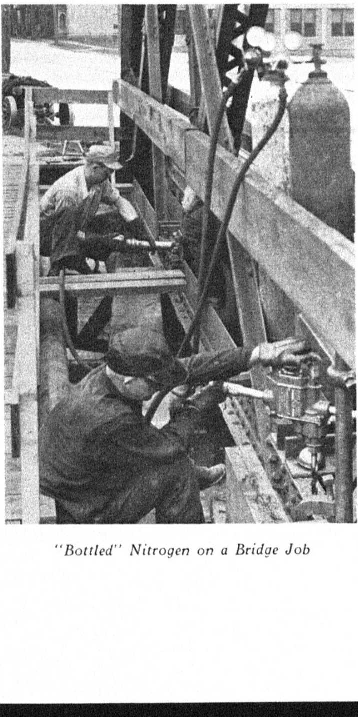
Where a preliminary inspection indicates that the work to be done will require the driving of 50 rivets or less "bottled" nitrogen has been used on our lines with satisfactory results. Shipped in steel tanks like those used for the transportation of oxygen for welding purposes, it is much less dangerous to handle than other gases. In fact it will put out a fire by smothering it as nitrogen will not support combustion.

The tanks are readily handled by baggage or on track motor cars to the point where the repairs are to be made. A series of tests made in the Green Island repair shops showed that one cylinder of gas would drive 25 ⅞" rivets in twelve minutes.

There are many places where it is extremely difficult, if not impossible, to drive rivets by hand. Similarly, ratchet-drilling of holes may be prevented by lack of room in which to work. Using compressed nitrogen it is possible to drill nine 15/16" holes through ½" steel at an average speed of 30 seconds per hole with one cylinder of gas.

Another feature of this method of making repairs is that it affords an excellent check on the condition of the pneumatic tools and their use, inefficiency of either tool or operator being indicated by the use of excessive quantities of nitrogen.

Among the jobs on which this method was used successfully are the Troy-Green Island lift bridge, Elsmere Ave. bridge, Elsmere, and two bridges at Wilkes-Barre.



"Bottled" Nitrogen on a Bridge Job

Paul Revere

(Continued from page 55)

Ironsides and many another commercial and wartime vessel, "I refine 1,800 pounds at a time."

Next he had to improvise a rolling mill so that, when he had melted down his metal, refined, poled and skimmed it and judged it to be of just the right color and pitch, he could make it into plates, sheets and doubtless other forms, by passing it between rollers, much as wet clothes are passed through a clothes wringer. But heaven only knows—various old hands won't even guess—how he achieved the intermediate step of preparing his metal for his rolls unless we may suppose that he drew it off, ran or poured it from ladles into sand molds or metal forms, permitted it to solidify and then reheated it in a second furnace before passing it back and forth, by hand or with water power, through his adjustable rolling mill.

We do know, however, that he tried to find or have made to drawings that still exist, rollers suitable for his mill. Finally he had to procure these, the records show, from Maidenhead, England.

His first recorded big sale, for a most significant purpose, was made to "Agents for Building the New State House" on Beacon Hill, in Boston, a sale noted proudly in his day-book, or "waste-book" as he inscribed it, on October 14, 1802. Incidentally this record also shows that he received

50 cents a pound for his copper—50 cents at a time when, compared with now, a dime was worth a dollar or so. A reporter, or at any rate a correspondent, of the *Massachusetts Spy* stood on Beacon Hill one day, looked up at the State House dome and, in the issue of the *Spy* of November 24, 1802, reflected his pride of Revere's copper by high praise plus this postscript:

"The only manufactory of Sheet Copper in America is in this State;—and the manufacturers above-mentioned have now ready for delivery 30,000 weight of sheet copper for covering the bottoms of the 74-gun ships ordered some years since to be built."

Instead of these "74-gun ships," however, six others, in the main designed by Colonel Humphreys —three warships of 36 guns, and three of 44 guns —had been started. Among these 44-gun ships was the Constitution—*Old Ironsides*, which was launched September 20, 1797, from Hartt's naval yard in Boston, where now one finds Constitution Wharf.

She had been laid up for two years when, in 1803, orders were issued for her to proceed, under Commodore Preble, along with our "Atlantic Fleet" to the Mediterranean to assist in "explaining" that the United States intended to maintain her freedom upon the seas. However, since she had been laid up she had to be reconditioned. Accordingly her English sheathing was stripped off, to be replaced by sheathing of Revere's making.

Also, Revere's correspondence in the archives of the Navy Department shows that, not only did he make the copper sheathing used on *Old Ironsides*, but he also provided quantities of what he called composition sheathing, nails and spikes used in her, her bell, rudder chain and many other items. In that correspondence, also, one finds him recommending that the ships of our Navy, when cruising in the Mediterranean, be ordered to put into Smyrna, to buy and bring back in ballast any available copper —another suggestion of his difficulties as a manufacturer at a time when America was far from being the largest copper producer in the world.

In 1804, "in the Twenty-ninth Year of the Independence of the United States of America," Revere obtained from Caleb Strong, "Governor and Commander in Chief, in and over the Commonwealth of Massachusetts" a passport for his son and associate in Revere & Son, to England, where James Monroe, our ambassador, facilitated his passage to Germany and Sweden, to study the manufacture of metal and to bring back drawings and the last word of information on copper and other metals.

After Robert Fulton's *Clermont* had made her way, regardless of wind and weather, to Albany, John R. Livingston, Fulton's partner, wrote to Revere, under date of October 8, 1808, "I am informed you have a mill for Roleing of Copper, and that you can furnish it of any size. * * *"

As the result of this inquiry, Fulton ordered various shipments of copper plates for use in steamboats built after the *Clermont*, including the first steam ferry-boat, directly from Revere.

But the larger picture goes back to our beginning, to the thought that it is high time that we altered our concept of Paul Revere. He was a man of such numerous abilities and achievements that there will likely never be another like him.

Obviously, then, someone needs to rewrite that poem beginning:

"Listen, my children, and you shall hear
Of the midnight ride of Paul Revere. * *"*

And no less obviously, these glimpses of Revere ought to be considered whenever any modern business man asserts that old-timers don't know their stuff!

Old Photos

A NUMBER of photographs, apparently loaned to *The Bulletin* something over five years ago and whose ownership we are unable to determine, are now in our files. It will be greatly appreciated if employees who have sent in such pictures will send us a description of them or call at Room 905, D. & H. Building, Albany, and identify their property. Among the collection are three views of the wreck at Cooperville drawbridge about 25 years ago.

Ode To A Nag

Oh, horse, you are a wondrous thing, no horns to honk, no bells to ring, no license buying every year with plates to stick on front and rear. No sparks to miss, no gears to slip; you start yourself; no clutch to slip. No gas bills mounting every day to steal the joy of life away.

Your inner tubes are all OK and thank the Lord they stay that way. Your spark plugs never miss and fuss, your motor never makes us cuss. Your frame is good for many a mile, your body never changes style. Your wants are few and easy met, you have something on the auto yet.—*Arkansas Highways.*

According to Rules

Commuter: "I found this dozen eggs on the train."

Station agent: "If they're not claimed in thirty days, they're yours."

No. 305 at Fonda Ave., Oneonta

Safety Shoes Save D. & H. Toes

LAST July a steam crane operator's foot was caught in the massive gears in the coal pocket machinery at Colonie, an accident which ordinarily would have so mutilated the man's foot that amputation would probably have been necessary. As it was, the leather covering the toe of his shoe was chewed off, although he escaped uninjured because of the fact that he was wearing steel-toed safety shoes.

The list of such escapes from injury might be extended almost indefinitely by the reports received in the office of the superintendent of safety since arrangements were made for employees to purchase these shoes at the various storerooms of the company.

In May a boom brace, weighing 100 pounds, fell on a machinist's foot with such force that his toes would probably have been severed had the blow not been absorbed by the steel toe of his safety shoe. At the Hudson Car Shop, in June, a pair of wheels weighing in the neighborhood of 1,600 pounds ran over a man's shoe without injuring him in the least. While the grade crossing elimination project at Albany was in progress a 500-pound steel tie fell on a trackman's foot, pinning him fast; however, when it was removed he continued his day's work as if nothing had happened. In several instances rails have fallen on trackmen's feet without injuring them. Still another remarkable incident occurred on the Champlain Division when a trackman, who was cutting the grass along the right of way stumbled and fell down the bank, his scythe cutting through the leather toe of his shoe and into the steel protecting arch; had he been wearing an ordinary shoe he would no doubt have been seriously injured.

These are but a few of the testimonials received by the Safety Department during the year 1933, although there were doubtless many other equally remarkable cases which were not reported.

Safety shoes are manufactured in a variety of styles and patterns, with a heat-treated, cold rolled steel cap inserted between the layers of leather which form the toe. Another piece of steel is placed in the arch of the shoe to add to its strength. In addition, the specially tanned leathers are said to be heat-resistant and flameproof.

Tests were recently conducted in the air brake room at the Colonie Car shops to determine how much pressure the toe would stand before breaking. Four shoes were successively put under pressure by means of different shaped blocks and the piston of an air cylinder and they withstood total loads of 1,650, 2,250, 2,900, and 3,500 pounds, respectively, before breaking. While these shoes were subjected to steady pressures, the tests give some indication of the protection given the wearer.

During the year 1933, 45 Car, Motive Power, and Maintenance of Way employees were injured. Six cases, or thirteen per cent, involved the men's feet. In all of these it is believed that injuries would have been avoided had safety shoes been worn.

The Stores Department keeps a supply of safety shoes in stock from which employees may be fitted and the purchase price deducted from their pay. A number of employees, whose work is not ordinarily hazardous, wear these shoes, not only because of the chance that they might prevent an injury to their feet, but also because they are so comfortable and inexpensive.

Education at Home

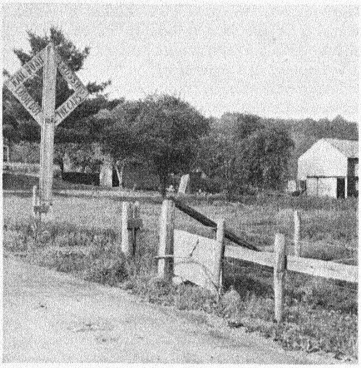
AN intelligent person can read good, legible printing at the rate of 24,000 words an hour. Giving due thought to each idea expressed, one can easily read and digest 12,000 words an hour.

A volume of 400 pages, containing about 250 words to the page, can therefore be read in seven or eight hours. In other words, if one were to read only an hour a day, he could finish the book within a week, and fifty such books within a year.

The average college student, in completing a four-year course, will be required to read and study, at least in part, about fifty books. Hence, any man or woman who will deliberately and thoughtfully devote an hour a day to a well-planned course of reading, can secure almost the equivalent of a college education.

No young person need bemoan the lack of higher education which may be depriving him of a better position or a desired vocation, if he has a little determination.—*Rays of Sunshine.*

A Grade Crossing Without a Railroad



THIRTY years have elapsed since the last Cooperstown and Charlotte Valley Railroad train crossed a country road near West Davenport, N. Y., and the rails and ties of what was once a prosperous line have long since been removed, yet the warning sign, although considerably weather-beaten, is still standing. When on October 9, 1903, a railroad trestle just north of West Davenport was washed out by a flood the line from Cooperstown Junction to Davenport Center was abandoned, the track was taken up, and what was once the right of way has since become so overgrown with weeds and brush that this old crossing sign is one of the few remaining reminders that a railroad once ran up Charlotte Valley.

Random Shots

A LONDON newspaper awarded its prize to the following as the best definition of "Money": "Money is an article which may be used as a universal passport to everywhere except Heaven, and as a universal provider of everything except happiness."

The population of the world is increasing at the rate of more than 12,000,000 a year.

It requires eight minutes and eight seconds for the light from the sun to reach the earth.

Placed in the deepest pit of the Pacific Ocean, Mount Everest, five and a half miles high, would still be submerged half a mile.

Last year's so-called "best seller" among the new books reached the total of 1,325,000 copies, while the Bible continued to lead with 30,000,000 copies sold.

The oldest and largest living thing in the world is said to be a cypress tree in a churchyard in Santa Maria del Tule, Mexico. This tree measures 112 feet, 2 inches, in diameter, and is getting larger every year. It is reputed to be at least five thousand years old.

Hot Box!

THE trainman heard the music of the car wheels humming low,
With his head stuck out the window of the upstairs "cupolo,"
And he heard the merry warble of the birds up in the trees,
Smelled the fragrance of the flowers borne upon the balmy breeze.
All the world was looking lovely, and his heart with rapture swelled
Till he heard the hot box squealing and the burning dope he smelled.
He forgot the fragrant flowers and forgot the birdie's song,
When he dug down in the locker for a brass ten inches long;
All the world turned dark and dreary and his heart felt just like lead,
As he gathered up the outfit, put the brass upon his head.
'Round his neck he hung the bucket that was filled with greasy dope,
In each hand a pail of water, in his mouth a cake of soap,
Then he lifted up and balanced the jack block upon his nose,
Deftly gathered up the jack bar, carried that between his toes,
Put the jack down in his pocket, on his ear he hung the hook.
The conductor carried what was left—the pencil and the book!

—*The Rail.*

Clicks from the Rails

A Tardy Passenger

who reached the station platform just as the Katy's *Bluebonnet* was pulling out of Denison, Tex., one sub-zero evening, seized a door handle and clung to the side of the car of the rapidly accelerating train. Long before the train made its next scheduled station stop, at Greenville, one hour and fifteen minutes later, he would undoubtedly have lost his grip and possibly been killed; however, an alert yardmaster saw the passenger's predicament as the train streaked by and telegraphed ahead to Bells where the train was stopped and the man was rescued from his precarious position.

The Chief Rat Catcher

of the London Northeastern at Wrenthrope, Yorkshire, England, is—or was until he went A. W. O. L.—Albert, a most unusual cat. The yardmaster, in an effort to locate him, published the information that "he is a tomcat, white with light and dark gray markings, slim build, aggressive, good at tricks, and always first into a car when opened." Albert has boarded empty cars before now and turned up in far distant cities, but his continued absence this time caused his master to publish an S. O. S.

A War-scarred Locomotive,

the London, Midland and Scottish's No. 2717, has recently been scrapped after 1,220,000 miles of service. This engine was sent to France in the early days of the World War and performed faithful service until the battle of Cambrai in November, 1917, when it was captured by the enemy, and for five months served as a machine gun post. In March, 1918, it was removed from the front, its bullet and shrapnel holes were patched, and it was used as a switcher behind the German lines until November, 1918, when it was recaptured by the British.

The Maple Leaf,

Canada's emblem, inspired a competition, sponsored by the Canadian Pacific Railway, which resulted in over 10,000 leaves being submitted by contestants. A New Brunswick leaf won first prize for the most beautiful, while that for the largest leaf was won by British Columbia. Arranged in large frames, the prize winners and a number of other outstanding specimens have been placed on display at Windsor Station, Montreal. They will also be shown at other stations across the Dominion.

The World's Slowest Train

is believed to be the "tea and sugar special" which carries supplies from Port Augusta, Australia, to Kalgoorlie and way points. Under its not too pressing schedule the train takes a week to travel the 1,051 miles and another week to make the return trip. More remarkable than the train's snail-like pace is the fact that it sometimes carries passengers!

Abraham Lincoln

once presented a silk cravat about three feet square to Leonard Howard, whose grandchildren, J. A. and L. E. Howard, both employees of the Illinois Central, prize it very highly. Their grandfather built the first stone building in Chicago, and his son, Burwall, was the first child born in that city after its incorporation.

Umbrellas are Rented

by the Southern Railway (England) and the London and North Eastern at a number of stations. The daily rental is the same, four cents, but the L. N. E. R. asks a deposit of $.84 for a man's umbrella while for a woman's "brolly" the deposit is $.60.

A New Trans-Siberian Line,

which, according to rumor, the Russians were building, and which would permit a five-day train schedule between Moscow and Vladivostok, caused many sleepless nights among European and Oriental diplomats because of its value in time of war. Investigation developed that the Russians were simply double-tracking 3,000 of the old Trans-Siberian's 4,400 miles, although instead of placing both tracks on one embankment the second track is in places as much as 20 miles from the other, providing a shorter route over a more favorable grade. There is the added advantage that the line will be more difficult to cut in wartime.

A Hand-carved Table,

the top of which contains over 3,000 pieces of wood, worked into an intricate pattern of stars, squares, and rectangles, was recently completed by George Ridgway, Canadian National crossing watchman at Hamilton, Ont., after 500 bours of patient labor. Following an injury which necessitated his transfer from the Bridge Department to a crossing watchman's post, Mr. Ridgway set to work to piece together the table, the top of which is two feet square. A total of 4,816 pieces of 22 different kinds of wood were used in its construction.

False Teeth, Lost

by engineer H. B. "Casey" Jones near Butte, Mont., when he sneezed and they dropped out of the cab window, were found by a searching party and returned to their owner on his return trip. Jone's train had just left Butte for Salt Lake City when the accident occurred which deprived him of his artificial molars. He immediately telegraphed friends who instituted a search which revealed the teeth resting on top of a snowdrift, and, as they said, "chattering from the cold."

Sowing and Reaping

WE must not hope to be mowers
And to gather the ripe gold ears,
Unless we have first been sowers,
And watered the furrows with tears.
It is not just as we take it,
This mythical world of ours:
Life's field will yield as we make it
A harvest of thorns or of flowers.

—GOETHE.